

WHAT IS CLAIMED IS:

1. A colloidal silica composition comprising:
an alkoxysilane compound;
5 an organic solvent;
deionized water; and,
a basic catalyst, wherein the colloidal silica composition further includes a basic
organic material for adjusting a hydrogen ion concentration (pH) to prevent the formation
of agglomerates when the colloidal silica composition is concentrated.

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2. The colloidal silica composition according to Claim 1, wherein the basic organic
material is added to the colloidal silica composition to the extent that the hydrogen ion
concentration (pH) of colloidal silica becomes 12 or more.

15 3. The colloidal silica composition according to Claim 1, wherein the basic
catalyst is ammonia water.

4. The colloidal silica composition according to Claim 1, wherein the basic
organic material is tetraethylammonium hydroxide.

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5. A method for producing a colloidal silica composition, the method comprising the steps of:

mixing and agitating an alkoxysilane compound, an organic solvent, deionized water, and a basic catalyst to produce colloidal silica;

5 washing the colloidal silica with deionized water to remove byproducts;

adding a basic organic material to the colloidal silica to adjust a hydrogen ion concentration (pH); and,

concentrating the pH-adjusted colloidal silica.

10 6. The method according to Claim 5, wherein the step of adding the basic organic material to adjust a hydrogen ion concentration is conducted before or after the step of washing the colloidal silica with deionized water to remove byproducts.

7. The method according to Claim 5, wherein the basic organic material is
15 tetraethylammonium hydroxide.

8. The method according to Claim 5, wherein the basic catalyst is ammonia water.

9. The method according to Claim 5, further comprising the steps of:

20 adding a predetermined amount of ethyl lactate and a predetermined amount of the pH-adjusted colloidal silica in a tubular mold to form a gel;

drying the molded gel at a predetermined temperature and humidity;

applying a first heat treatment to the dried gel while adding a chlorine gas; and,
applying a second heat treatment to obtain a tubular silica glass.

10. The method according to claim 5, further comprising the step of:

5 applying a third heat treatment to remove organic materials.

11. A method for producing silica glass comprising the steps of:

mixing and agitating an alkoxysilane compound, an organic solvent, deionized
water, and a basic catalyst to produce colloidal silica;

10 adding a basic organic material to the colloidal silica to adjust a hydrogen ion
concentration (pH);

concentrating the pH-adjusted colloidal silica until a concentration of the colloidal
silica becomes 45% or more;

adding ester material to the concentrated colloidal silica; and,

15 injecting and molding the resulting colloidal silica in a mold to cause gelation of
the colloidal silica.

12. The method according to Claim 11, wherein the basic organic material is added
to the colloidal silica composition to the extent that the hydrogen ion concentration (pH) of
20 colloidal silica becomes 12 to 12.8.

13. The method according to Claim 11, wherein the basic organic material is tetraethylammonium hydroxide.

14. The method according to Claim 11, wherein the basic catalyst is ammonia
5 water.